Distributed Mission Training: Technology & Innovation Working Group

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Science and Technology for Tomorrow's Air and Space Force

Goals

- **Review IPT tasking**
- **Outline candidate approach**
- **Obtain feedback**
- **Identify organizational focal points**
- **Identify enabling technologies**

Tasking

- **Develop Technology Investment Strategy (TIS) to support MAJCOM Training Implementation Plans (TIPs)**
- **Develop near-term plan to harvest “low hanging fruit”**
- **Develop strategy for evaluating and incorporating technologies in concert with O&I contractor and DWCs**

Benefits

- **Identifies technical capabilities necessary to fulfill DMT vision**
- **Identifies funding needed and schedule**
  - **Focuses govt and industry R&D planning**
  - **Manages govt and industry expectations**

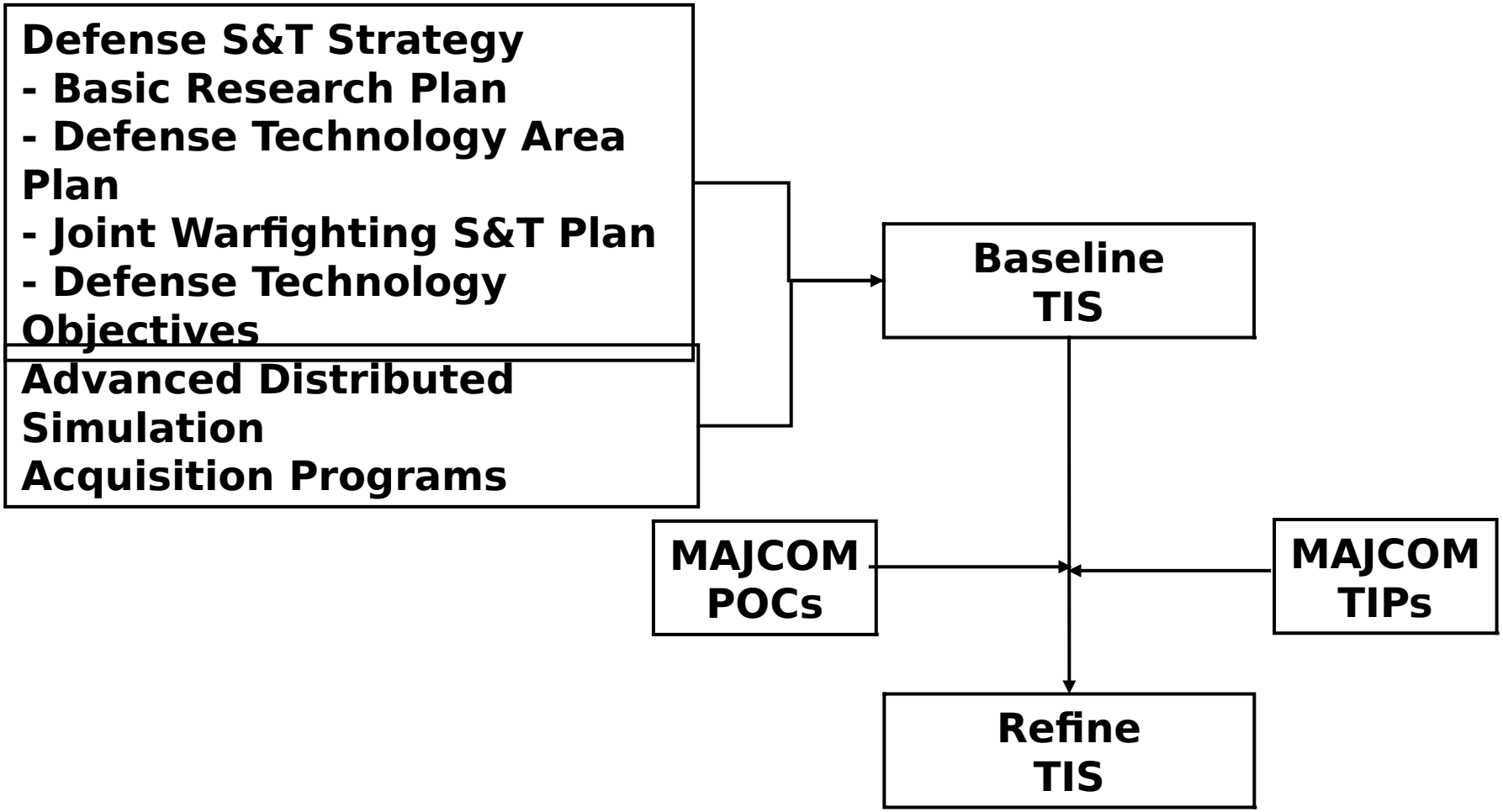
Challenges

- **Short time frame (< 3 mos) to produce TIS to impact 02 POM submission**
- **MAJCOM plans are fragmented and incomplete**
- **Detailed training requirements and conops are still evolving**
- **O&I contract and DWCs are not established**

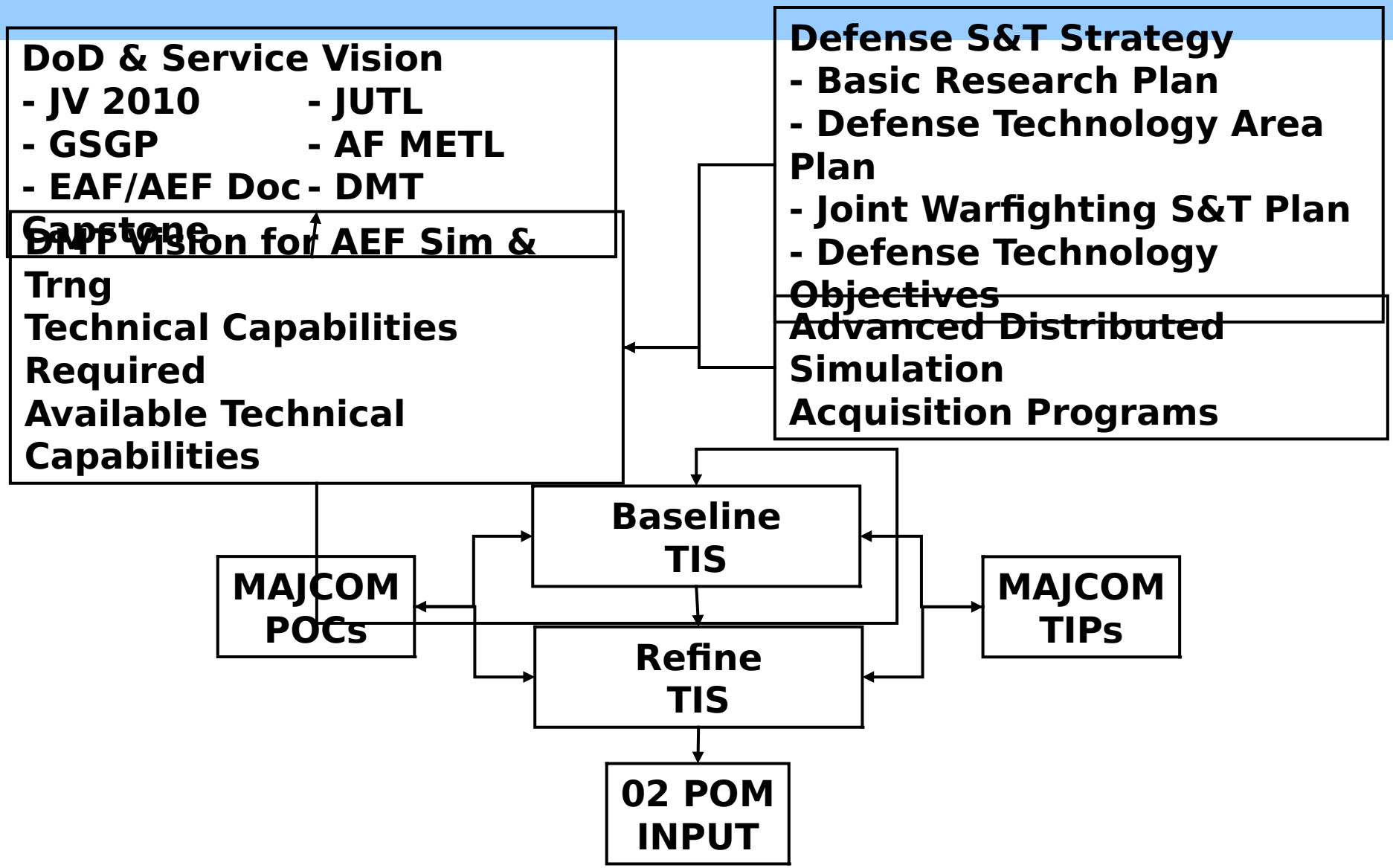
Recommendations

- **Do not wait for TIPs and supporting documents from other working groups**
- **First priority**
  - **Prepare baseline TIS using existing documents**
  - **Adjust required capabilities and priorities as TIPs develop/evolve**
- **Second priority task pursue “low hanging fruit”**
- **Defer detailed O&I and DWCs activities**

TIS Development



TIS Development



TIS Structure

TECHNOLOGY INVESTMENT STRATEGY

TECH AREA	CAPABILITIES GOAL	2 YR	$	5 YR	$	+5YRS

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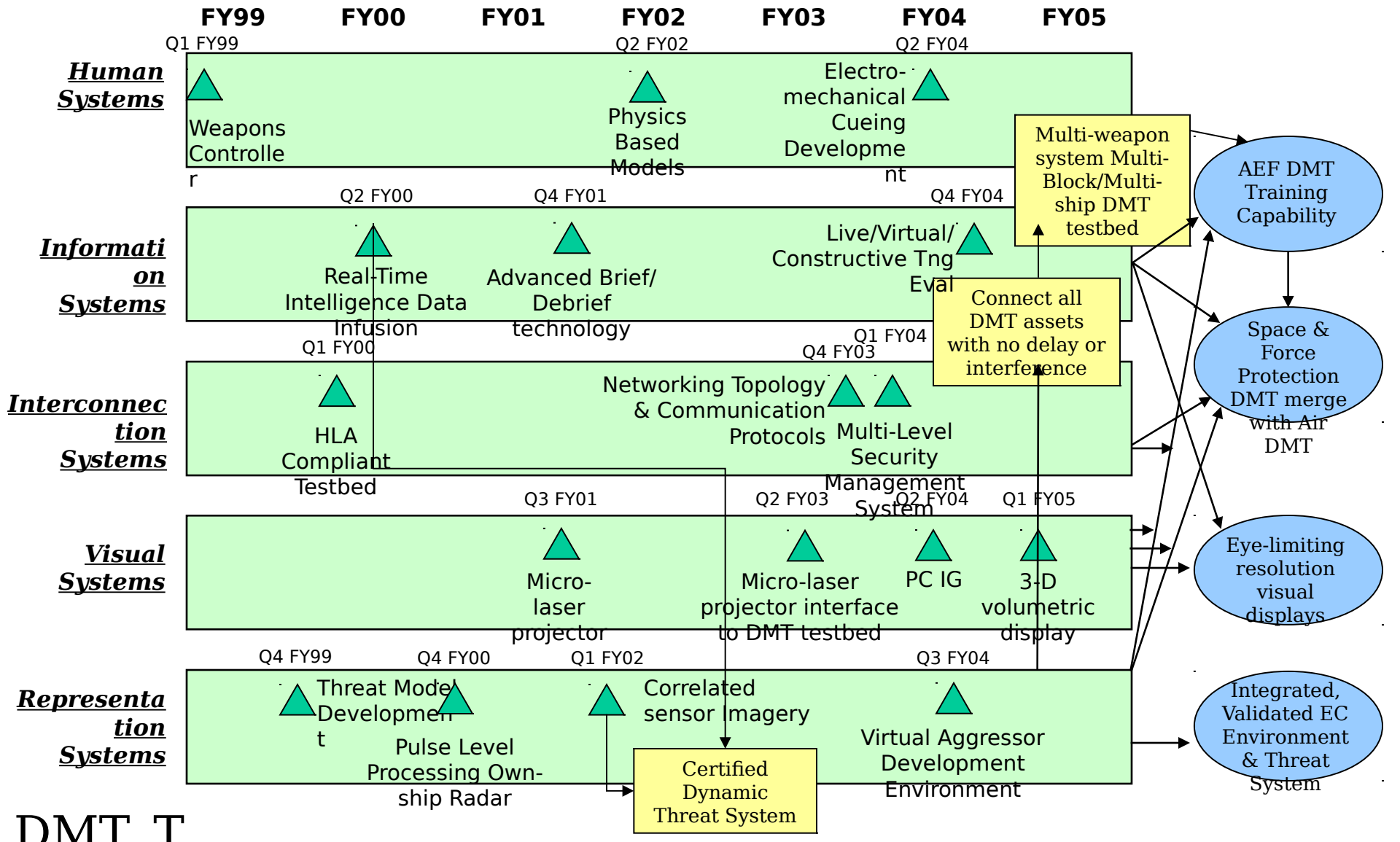
Simulation and DMT Roadmap



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Approach

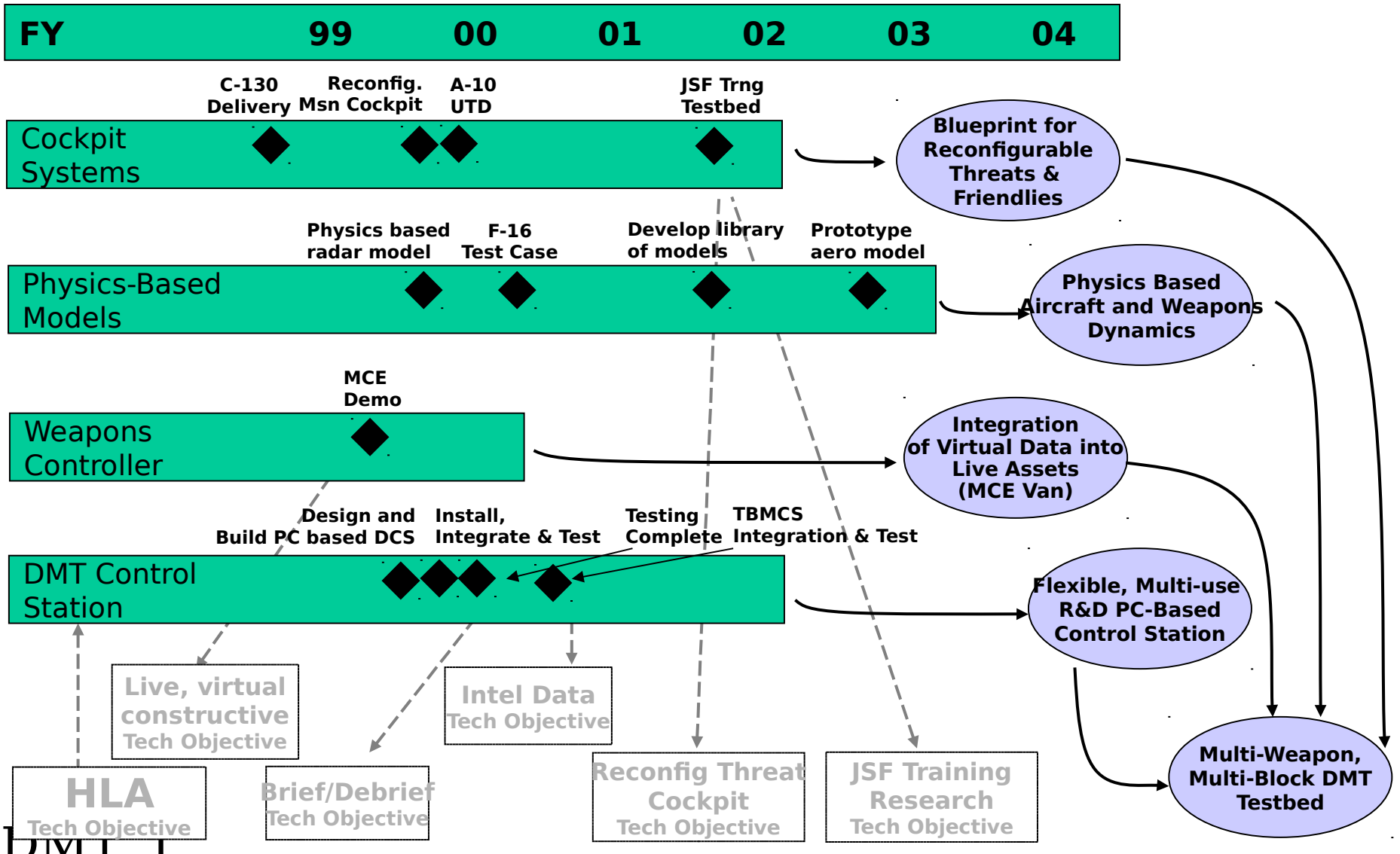
- **How are we doing so far?**

DMT-A Technology Areas

DMT Technical Areas

- **Human Systems Technology**
  - Training Strategies
  - Control Station
  - Cueing
  - Cockpit Technologies
  - Testbeds
  - Physics-based Modeling
  - Theater Battle Management Core Systems (TBMCS)

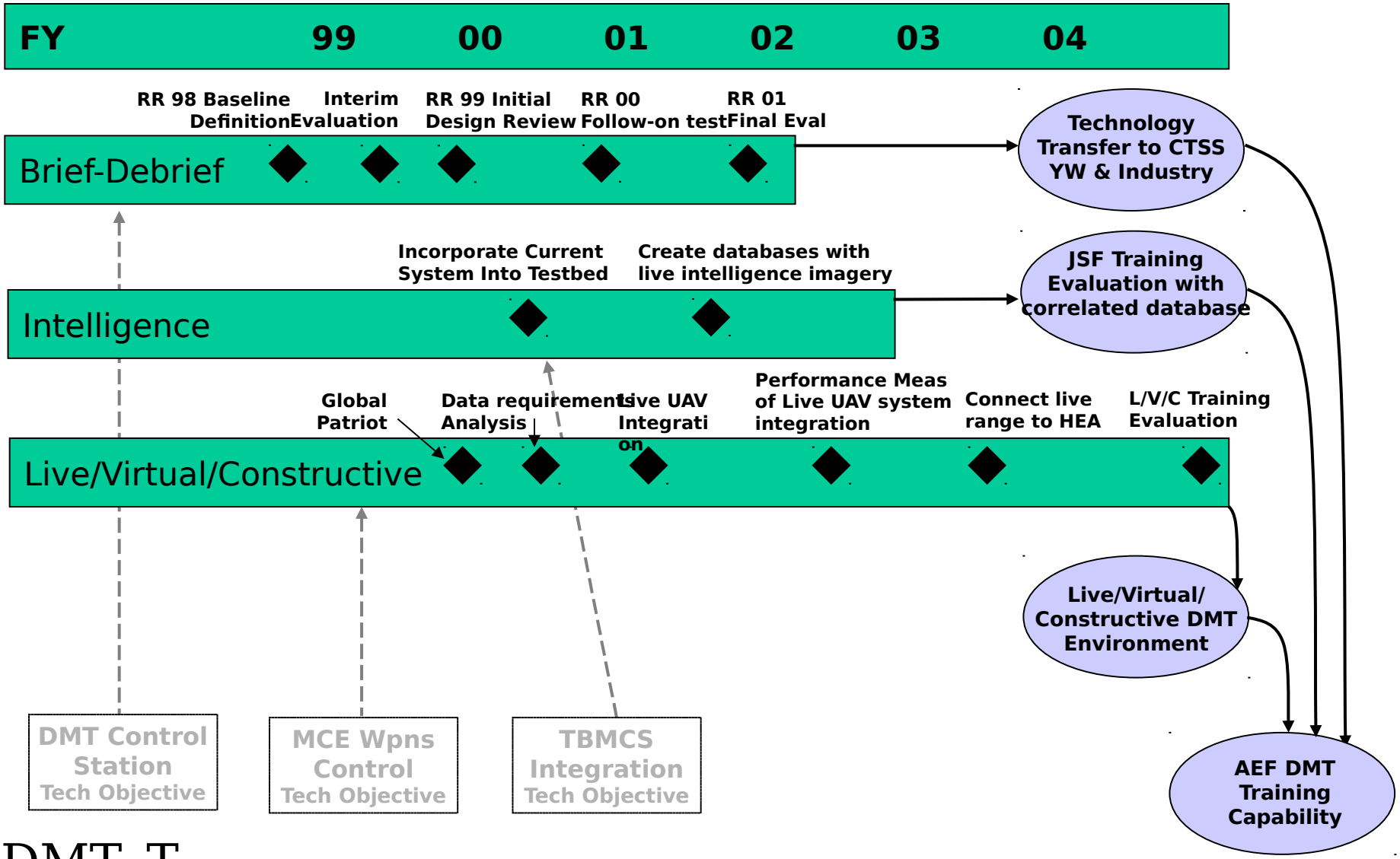
Human Systems Technology Roadmap



DMT Technical Areas

- **Information Technology**
  - Performance Feedback
  - Advanced Brief and Debrief
  - Mission Planning
  - Real-time Intelligence Data Fusion
  - Live/Virtual/Constructive and interfaces

Information Technology Roadmap



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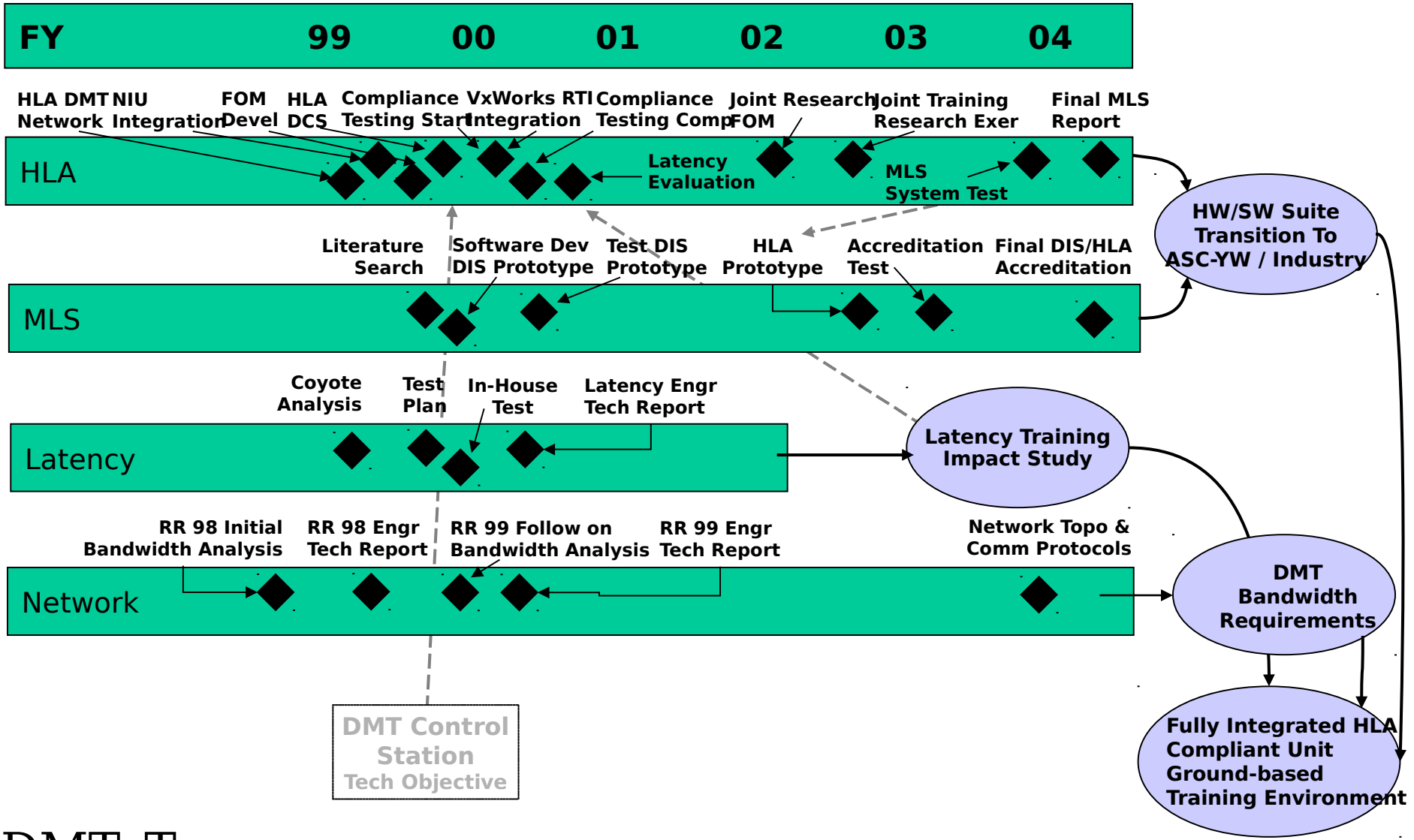
DMT Technical Areas

- **Interconnection Technology**
  - High Level Architecture (HLA)
    - » Distributed Interactive Simulation (DIS) Protocol
  - Networking
    - » Bandwidth
    - » Latency
  - Multi-level Security Management (MLM)

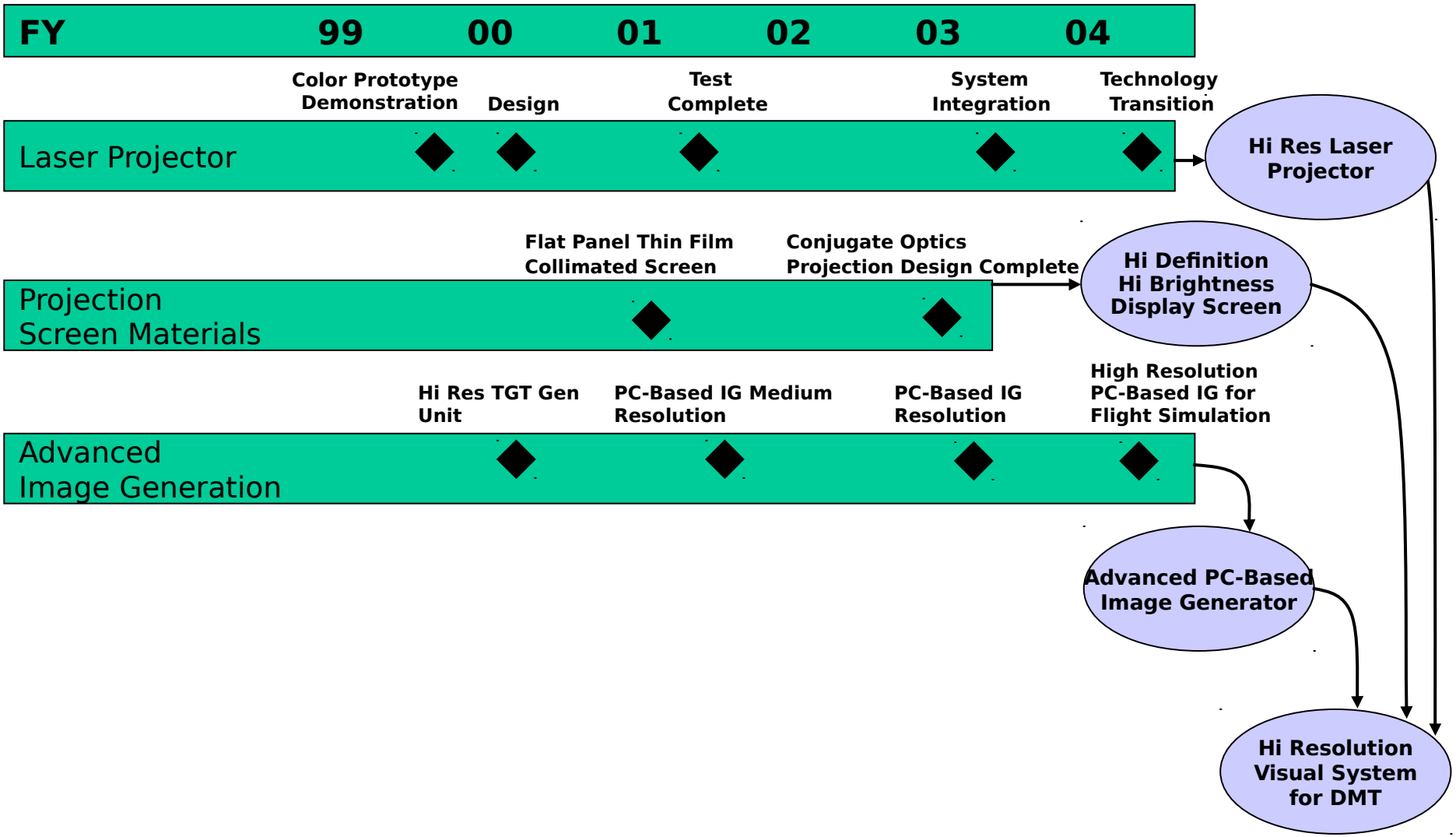
Interconnection Technology Roadmap



DMT Technical Areas

- **Visual Technology**
  - Visual Displays
  - Microlaser Projection Systems
  - Helmet mounted Displays
  - 3D Monitors
  - Image Generation

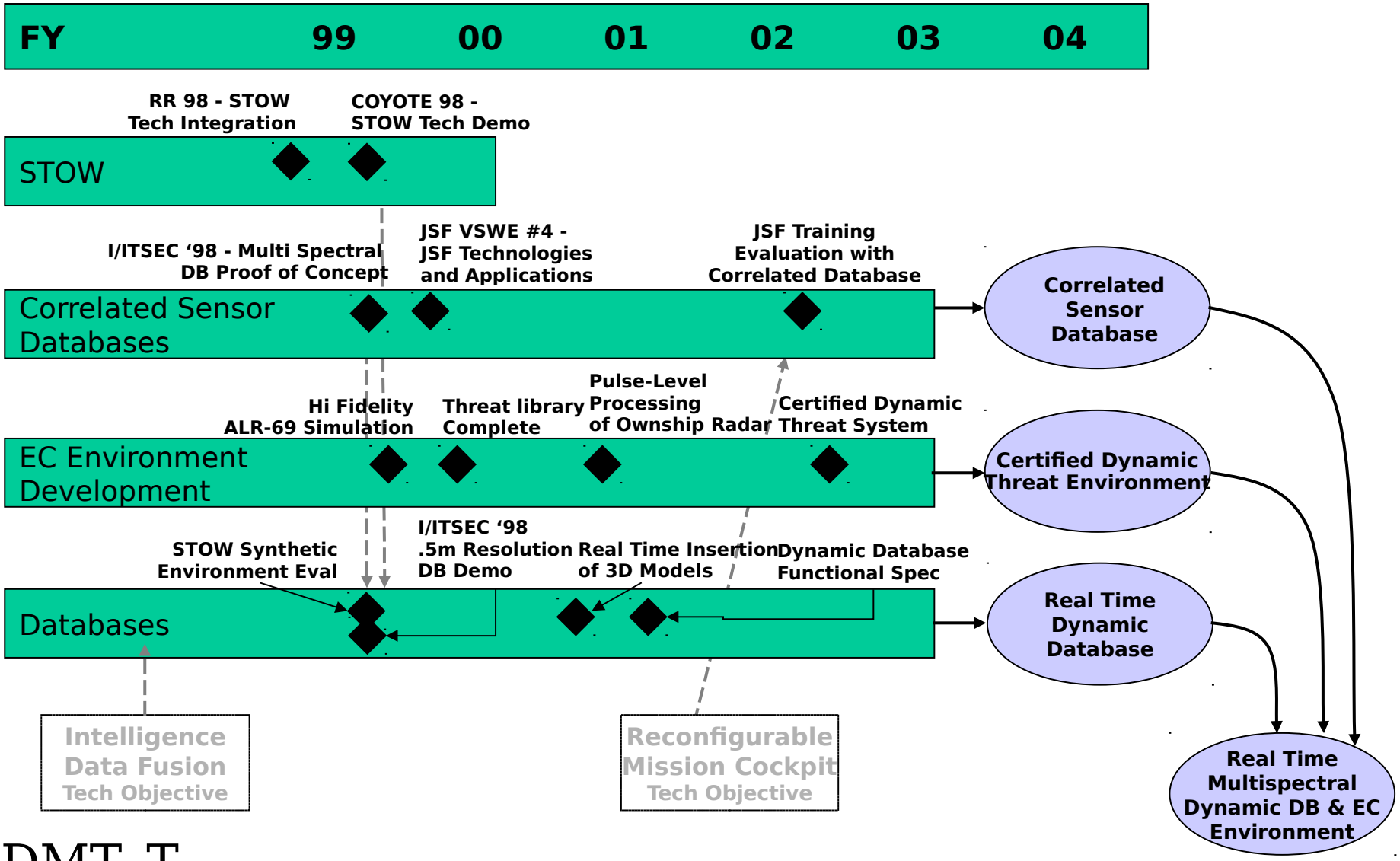
Visual Technology Roadmap



DMT Technical Areas

- **Representation Technology**
  - Synthetic Environments
  - Semi-automated Forces
  - Synthetic Theater of War (STOW) Technology
  - Human Computer Interfaces
  - Databases
  - Correlated Sensor Imagery
  - Digital Radar Land Mass Systems
  - Electronic Combat Environment Development
  - Threat Cockpits and modeling
  - Virtual Aggressor Environment

Representation Technology Roadmap



Discussion

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